

BLOKING DIE CUTTING METHOD AND LOCATING DEVICE

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[54] 发明名称 分块式冲裁方法及定位装置

[57] 摘要

分块式冲裁方法及装置,在凸模外侧安装导正套,用于板材在模具上的定位,模具对待冲孔进行多次分块冲裁加工成形。一副模具能冲多种不同规格的孔,从而减少模具数量,扩大加工范围,无需专用冲床和大吨位压机。尤其适合于数量少、品种多的产品加工。

分块式冲裁方法及定位装置

本发明属于冲裁成形加工方法以及用于该方法的专用定位装置。

对板材进行孔的冲裁成形加工，例如各种电气开关柜、控制柜表盘上的表孔的冲裁加工，现有技术一般都采用“同廓式冲裁法”，即各孔专模专用，模具的刃口形状与待冲孔的形状完全相同，刃口尺寸是根据被冲孔的要求设计制造的。这种传统的普通冲裁法使模具多规格多数量，模具的设计、制造、储藏、装配调整工作量繁重，费料费时，尤其对小批量多品种的生产，增加消耗，提高成本，而对大孔的冲裁，则要求大吨位压机，常受条件限制。美国有用计算机控制的多工位冲裁法，即用控制板料移动与模具各工位调换相结合的方法，但这种高价的专用设备，除了提高工效和加工精度外，仍属于有上述缺点的同廓式冲裁法。

本发明的目的是要克服上述不足之处，提供一种新的冲裁方法，使一副模具能冲裁多种不同规格的孔，从而减少模具数量，扩大加工范围，无需专用冲床。

本发明的方案结合附图说明，附图分为分块式冲裁及定位装置示意图。参看附图，在凸模(1)外侧安装导正套(2)，将导正套(2)靠近板材(5)，移动板材(5)，使待冲孔孔周线(6)依次与导正套(2)端口线重合或相切以实现板材在模具上的定位，模具对待冲孔依次进行多次分块冲裁加工成形。

用于本发明方法的专用设备，冲床和模具结构与普通冲床和敞开式冲孔模具基本相同，其特征在于定位装置。对于板材定位这一本发明方法中的关键问题，本发明的定位装置是在凸模(1)的外侧安装导正套(2)，导正套(2)固定在支承板(3)上，支承板两端由两根长螺杆(4)与压机滑枕两边的固定螺母联接，导正套(2)与凸模(1)之间可相对运动，但间隙不大，以保证定位精确。

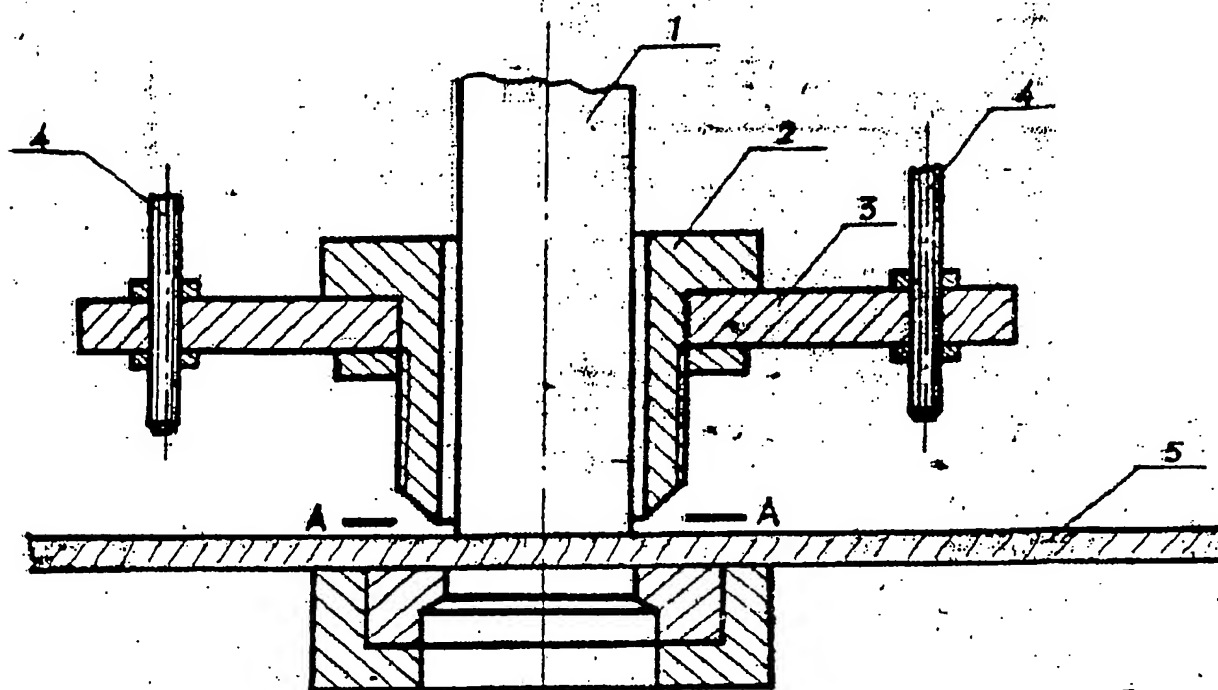
本发明一副模具可对形状相似尺寸大小不同的多孔进行冲裁成形，尤其适合于小批量多品种产品的加工和大孔的冲裁，无需专用设备和大吨位压机，模具数量少，消耗低，模具设计、制造、使用保管容易，加工成本低，操作简单，模具寿命长。

权 利 要 求 书

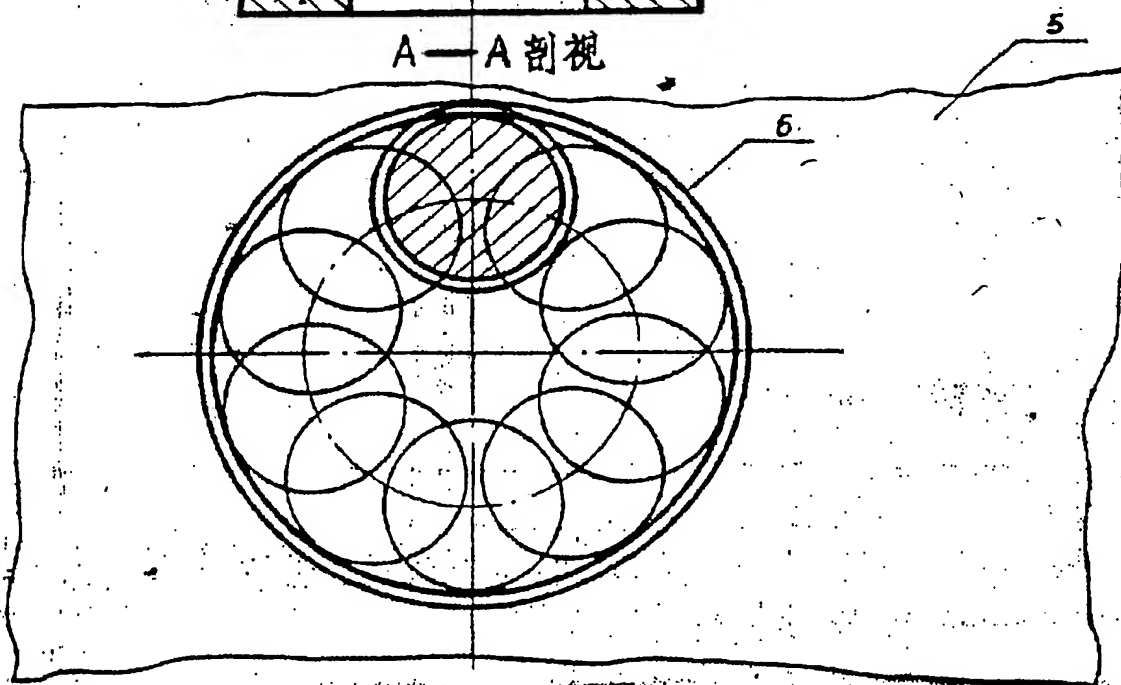
1、一种分块式冲裁方法，本发明的特征在于：在凸模外(1)侧安装导正套(2)，将导正套靠近板材(5)，移动板材，使待冲孔周线(6)依次与导正套(2)端口线重合或相切以实现板材在模具上的定位，模具对待冲孔依次进行多次分块冲裁加工成形。

2、用于分块式冲裁方法的定位装置，其特征在于：在凸模外侧安装有导正套(2)。

说明书附图



A—A剖视



The invention belongs to blanking forming work method and is used for the special positioner of this method.

Carry out the blanking forming work in hole to panel, the for example blanking processing in the table hole on various electric switch cabinets, the switch board dial plate, the prior art generally all adopts " with wide formula blanking method ", the special mould in each hole is special promptly, the blade shape of mould with wait that the shape of punching a hole is identical, the blade size is the manufacturing and designing that requires according to being punched a hole. This kind of traditional ordinary blanking method makes the most volumes of the many specifications of mould, and the design of mould, manufacturing, storage, setup work load are heavy, take the material and takes time, especially to the production of the many varieties of short run, increases and consumes the improvement cost; And to macroporous blanking, then require the large-tonnage press, limited by the condition. There is a multistation blanking method of computerizeing control in the United States, moves the method that combines together with each station change of mould with the control sheet material promptly, but the special equipment of this kind of high price, except improving work efficiency and machining precision, still belong to have above-mentioned shortcoming with wide formula blanking method.

Above-mentioned weak point will be overcome to the purpose of the invention, provides a new blanking method, makes the hole of the multiple different specifications of a pair mould ability blanking, thereby reduces mould quantity, enlarges the range of work, need not special punch press.

The scheme of the invention combines the description drawings. The figure is sectional type blanking and positioner sketch map. Seeing the figure, leading in terrace die (1) outside installation and just overlap (2), will lead and just overlap (2) and be close to panel (5), move panel (5), make wait to punch a hole hole contour (6) just overlap (2) port line coincidence or tangent in order realizing the location of panel on the mould with leading in proper order, the mould is treated to punch a hole and is carried out a lot of piecemeal blanking in proper order and shape.

Be used for the special equipment of invention method, it is the same basically that the mould is punched a hole to punch press and mould structure and ordinary punch press and open-type, characterized in the positioner. Fix a position the key issue in this invention method to panel, the positioner of the invention leads in the installation of the outside of terrace die (1) just to overlap (2). Leading and just overlapping (2) and fix on bearing plate (3), the bearing plate both ends are by the fixed nut hookup of two root length screw rod (4) with press ram both sides. Lead and just overlap (2) and terrace die (1) relative motion between but, but the clearance is little, it is accurate in order to guarantee the location.

Invention a pair mould can take shape to the different porous blanking that carries on of the similar size of a dimension of shape, especially is suitable for the processing and the macroporous blanking of many varieties of short run product, need not special equipment and large-tonnage press. The mould is small in quantity, consumption is low, and it is easy that mold design, manufacturing, use are taken care of, and the processing cost is low, the simplicity of operation, and the die life is long.

Claim

1, sectional type blanking method the invention is characterized in: (1) side-mounting is led and is just overlapped (2) outside the terrace die, will lead and just overlap near panel (5), move panel, make wait to punch a hole hole contour (6) just overlap (2) port line coincidence or tangent in order realizing the location of panel on the mould with leading in proper order, the mould is treated to punch a hole and is carried out a lot of piecemeal blanking in proper order and shape.

2, be used for the positioner of sectional type blanking method, characterized in: install to lead outside the terrace die and just overlap (2).